J. Waldburg

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SEABROOK ON THE COTTON PLANT.

A MEMOIR on the Origin, Cultivation and uses of Cotton, from the earliest ages to the present time, with especial reference to the Sea-Island Cotton Plant, including the Improvements in its Cultivation, and the preparation of the Wool, &c. in Georgia and South-Carolina; read before the Agricultural Society of St. John's, Colleton, November 13th, 1843, and the State Agricultural Society of South-Carolina, December 6th, 1843, and by both Societies ordered to be published. By Whitemarsh B. Seabrook, President of the State Agricultural Society of South-Carolina, price 25 cents. For sale by A. E. MILLER.

March 1

The Subscribers to the Southern Agriculturist are reminded, that the Price of the Journal was reduced last year to all those who paid in advance; those who are still in arrears for this and former years are respectfully solicited to make their payments.

Terms of the Southern Agriculturist.

Three Dollars, payable in advance;—for two copies $5; Societies and Clubs can be supplied with ten copies for $20, payable in advance.

THE SOUTHERN AGRICULTURIST.

(NEW SERIES.)

Vol. IV. FOR NOVEMBER, 1844. No. 11.

For the Southern Agriculturist.

PLANTERS' CLUBS.

CHARLESTON, September 21, 1844.

Mr. Editor,—I send for your consideration the draft of a Constitution for a "*Planters' Club*," with a request that should it be approved of, you will oblige me by giving, with these remarks, an early insertion in your valuable periodical; and open at your office a subscription list for members of the same.

"Farmers' Clubs" are in high repute at the North, and are the means of effecting much good; and although it is hoped, that *our* respectable body of Farmers will unite in the formation of the proposed Society, yet it is thought, that as the majority of its members (if formed) will undoubtedly be from amongthe Planters, the title "Planters' Club" will better suit our Southern organization.

It is far from my intention or my wish, to raise up a Society which may in any manner interfere with our present efficient Agricultural Society; but I rather wish it to be considered as an auxiliary—they may both do much for our neglected agriculture, without the least interference with each other.

It does seem to me important, that our Planters and Farmers should have the means of obtaining the earliest information of those improvements and advances in the science of agriculture, which are progressing with such strides both in our own country and in Europe, and some facility in procuring an early perusal of the large number of works, valuable newspapers and periodicals, now steadily issuing from the press. It cannot be expected that planters, in addition to the numerous other expenses incident to their pursuits, will spend much in the purchase of agricultural libraries,

or in subscriptions to agricultural papers, and therefore, it is desirable to obtain by their united means, what it would be impracticable for each planter to obtain by his single effort; and it is a remarkable fact, that in a strictly agricultural community, the purchase of works, connected with this branch of science, appears to be particularly avoided by all of our public library societies.

Our planters have much leisure during the summer months, and that they will pass much of this leisure time in communication with each other in Broad-street, will not I presume, at this day, admit of a doubt. I propose therefore, that we procure for ourselves some room, where with the best reading, and the best company at our command, we may pass our hours in a way, rather more profitably, than we have heretofore done. The constant interchange also, of sentiments and opinions between planters, from different sections of the country, which will be elicited, will be a great mean of forming a closer union than has heretofore prevailed, and the instruction which will be afforded by the daily addresses from members, on subjects upon which it is presumed, from the selections being left to themselves, they will be informed, cannot but be valuable in its effects. It is not intended that each member shall be compelled to compose and deliver an address in his turn—the duty it will be perceived, can easily be avoided by paying the trifling penalty—a sum trifling to the member, but which in all probability will in time be of much avail to our treasury.

It has always been a matter of much surprise, that there has never been any place in our city, to which remarkable growth of plants, uncommon flowers, or fine fruit might be sent for exhibition; such a place we propose to furnish. Planters also lose many an opportunity of viewing fine animals, for want of a convenient place to shew them, this difficulty will be avoided by exhibiting them before the doors of the Club rooms.

It is scarcely necessary for me to state, that the periodical which it is proposed to sustain, is your own *Southern Agriculturist*, which I would be glad to see enlarged and more generally supported.—The information laid constantly before the Club by its members, details of experiments, and the daily addresses, which in all probability will be at your command, will of themselves furnish much valuable and interesting matter for your journal.

Having now proposed this plan and suggested the mode of reviving an interest in our neglected agricultural pursuits, I feel that I have done my part—the carrying out of the scheme, should it meet with approbation, I must leave to others, rendering only whatever of feeble aid it may be in my power to afford. I am not particularly wedded to all the features of this scheme, they will of course, undergo revision, and such alteration as may be deemed advisable; but I do feel confident, that should these suggestions be carried out in their spirit, we will in a very few years, remove those reproaches (perhaps deserved,) which we now see incessantly poured upon us, for our supineness, by more zealous portions of our country.

AGRICOLA.

CONSTITUTION OF THE "PLANTERS' CLUB."

I. This Society shall be known by the name of the "Planters' Club."

II. The officers shall consist of a President, Vice-President, Secretary, Treasurer, Committee on the Library, and a Committee on Exhibitions and Premiums.

III. A meeting shall be held on the 3d Thursday of every July, which shall be considered the Anniversary day of the Club, at which there shall always be delivered an annual address by some member elected by the ballot of the Club; and there shall be an exhibition of animals, plants, flowers and fruit. The competition for the premiums to be open to the public.

IV. There shall be procured in some central part of the city, a Hall, to be used as a place of meeting, and Reading Room for the Club; and every day at one o'clock, P. M., from the second Monday in May, to the first day of November, the members who may be present at the Reading Room, shall be called to order, and an Essay on some subject connected with agriculture be delivered by a member. After which, communications may be made by any present, of agricultural experiments, state of the growing crops, results of planting, and of such other matters as may tend in any way to the advancement of the science of agriculture—remarks or conversation on other subjects, shall be entirely out of order.

V. At the time of organization, an alphabetical list of all the members shall be made, and in this order shall they be charged

with the duty of delivering the daily address, under a forfeiture to the Treasury of two dollars and fifty cents for each default. New members shall perform that duty in the order in which they shall be admitted.

VI. It shall be the duty of the Committee on the Library, to procure a Hall as a Reading Room and place of meeting, and keep the same arranged for the purposes to which it may be devoted; to purchase works, and subscribe to newspapers and periodicals, connected with agriculture in all its branches, and to make arrangements for the delivery of the daily addresses.

VII. It shall be the duty of the Committee on Exhibitions and Premiums, to receive and display at the Club Room, all remarkable animals, plants, fruits or flowers, as may at any time be sent there; superintend the annual exhibition and award the premiums.

VIII. At the time of organization, or at the time of admission, each member shall pay to the Treasurer the sum of Five dollars, and a like sum on every anniversary thereafter.

IX. No alteration or amendment of this Constitution shall be made, without notice of the alteration proposed being given at some daily meeting, and the matter be acted upon at an extra meeting to be specially convened by the President, or at the ensuing anniversary meeting; and not less than twenty members shall be a quorum for the transaction of business.

X. New members may be elected by ballot, at any meeting at which there shall be a quorum present.

XI. It shall be one of the principal objects of this Club, to sustain in Charleston, by such means as they shall deem fit, some Agricultural paper.

[We would recommend to the serious consideration of our Planters and Farmers, the foregoing article. The plan it proposes for the formation of "Planters' Clubs," is one, which will do more good in extending agricultural information, than any we know of that could be adopted. The daily meetings of its members, the free interchange of opinions, the results of their experiments, &c., should be a sufficient inducement for the formation of such a Club. At the request of the writer, we have opened a subscription list for members at our office, and solicit the names of our friends connected with the planting interest.—EDITOR.]

For the Southern Agriculturist.

REPORT OF THE INSPECTING COMMITTEE OF THE ST. JOHN'S COLLETON AGRICULTURAL SOCIETY.

Edisto Island Club House, Sept. 9th, 1844.

The Committee of Inspection report: That they commenced their tour of inspection on the 30th ult., and continued to discharge that duty on the 3rd and 6th insts. examining the crops of the members in the southern, western, and northern sections, in the order mentioned at the conclusion of this report.

In the begining of summer, and for some time after, the promise of large crops cheered the planter. An early and warm spring with a sufficient supply of rain, and the absence of high winds, had induced a rapid growth, and stimulated the cotton plants to the putting out, at a very early period, of an extraordinary quantity of fruit. All things wore an encouraging appearance, and the most inveterate grumbler was silent. This state of the crops continued till the conclusion of the month of June, when the cotton plant on most plantations was taller than usual. The effects of the drought, which then prevailed, were a sudden checking of its growth, and the appearance here and there, of the leaf bug. This disease was by no means common then, being confined to a few plantations, where, however, it was severely felt. The plants now assumed a truly cheering appearance, spreading wide their tops, and putting forth and maturing their fruit in a most astonishing manner. But now began a series of drought, interrupted now and then, by light rains,—which distinctive marks of the season, continued down to the present month. The bug disease—a disease nearly resembling the rust, and from which it is difficult to distinguish it—and the rust in its several forms, began to spread far and wide over our fields, avoiding only a few plantations. The stalks and leaves losing the colors of July, assumed those of September, and every thing indicated an early maturity. Accordingly more cotton was gathered during the last month, than was ever housed in any previous August. The Committee, however, would not draw from this fact the conclusion, that the present will be a very "heavy crop;" it may equal that of 1839, but will not bare comparison with the great crops of '26 and '28.* The causes of the

*This alludes to the Sea-Island Crop.—Ed.

falling off from the promise of the first of July, are clear enough. To confine ourselves to a consideration of the kind of weather that has prevailed since the commencement of summer, would not enable us satisfactorily to clear up the mystery; for upon a due exercise of our memories and reflective powers, we cannot but admit that the quantity of rain which fell during the two last months, though small, would have been, under ordinary circumstances, nearly, if not quite enough for our purposes. We must go further back. The very small quantity of rain which fell during the last fall, winter, and spring, had so far reduced the quantity of water in the earth, that *a very rainy summer* would scarcely have raised the moisture in our dry soils to the usual height; added to this there was an unusual proportion of hot sunny weather. These concurring causes are sufficient to account for the sudden check in the growth of cotton, its rapid progress towards maturity, and the diseased state of the plants. It was a remark of a much respected member of this Society now deceased, whose habits of observation, and judgment in such matters, were acknowledged by all, that cotton usually doubles its height after the first of July. The rule cannot apply this year. On the first of July the plants had attained quite as great a height as our lands are capable of producing; but since then they have scarcely grown at all. This is emphatically the case on some plantations—such as Mr. M'Neill's, Mr. Beckett's, and some others, where the droughts were most intense, and the lands naturally very dry.

Your Committee further report, that in the course of their inspection, they paid particular attention to the subject of manures; observing the effects of the different manures, and inquiring into the quantities applied, and the manner of applying them. We concur in the opinion, that "the running cowpen," considered singly, maintains the highest rank; and that when followed by the application of a sufficient quantity of mud, it is incomparably the best. Whether this is the most economical mode of using our cattle, for the purpose of increasing the productive powers of our lands, is a question your Committee will not undertake to settle. Many planters believe it would be better to employ our cattle all the year round in the compost pens. Others think it advisable to run our pens over the poorest lands, at least for a part of the year.

Composts, by which we mean marsh, rushes, or wood trash, partially decomposed by the penning of cattle on them, still deserve all the praise that has ever been bestowed on them. Marsh and rushes listed in, either in a green or dry state, are no doubt good manures; but they in common with cowpen composts, have, in some instances, failed this season to do much good, owing to the circumstance of there being too little moisture in the soil, to render them fully available in the nourishment of the plants. Mud, on the contrary, having the capacity of attracting and retaining moisture, and containing, moreover, a considerable proportion of decomposed and decaying vegetable substances, is peculiarly efficient this year.—The Committee regret, that more mud has not been applied to the present crop, the season being such as to make that very valuable manure more than usually beneficial. Calcareous manures have not been used to as great an extent, as the inquiring disposition and enterprising spirit of the members of this Society would induce us to expect. Mr. Beckett has taken the boldest step forward in this matter, and we trust, will meet his reward in the permanent improvement of his land. He has marled fourteen acres of cotton, and five acres of corn land, at the rate of one hundred and fifty bushels to the acre. The effect on the cotton is not as great as might have been expected, or as was produced in another field last year; the season, perhaps, not being favorable for developing its beneficial influence. Your Committee remarked, that it had produced a fresh and healthy appearance in the cotton plants, though the growth is small in consequence of the drought; and that the corn upon which it was applied, promises a good yield, though unassisted by any other manure. Another year's planting of the same land will test its value. In conclusion on the subject of manures, your Committee would bring to the notice of the Society, the fact, that the crops of the members, (difference in the quality of lands and the seasons being considered,) are good or bad, in direct proportion to the quantity and quality of manures applied. This should stimulate members to the greatest exertion, in supplying their lands with that which is as necessary to their profitableness, as food is to man's existence. It is but too evident to the Committee, that less manure is now made and applied than formerly. The short crops, and consequent disappointments of several years

past, have probably suggested doubts about the good effects of manure, and thus dampened the zeal of some planters. This is not right. To apply the greatest possible quantity of good manure, that our resources will enable us to make, should be the invariable rule and practice of every planter.

Your Committee observed with much satisfaction, the improvements made by Mr Baynard on his Little Edisto place. A very large proportion of the high land, so called, but which was constantly liable to be overflowed by the tides, and thus rendered valueless, has been thoroughly reclaimed, and is now highly productive; and extensive fields have been rescued from marsh and swamp, and now promise an immense yield. His system of keeping no cattle on the plantation, and planting every year the same land, and on the same beds, whether high land or reclaimed marsh, is in some respects new, and so far as your Committee can see, the best he could possibly have adopted for such lands.

Mr. Fuller's system of excluding cattle from all his planting land during the summer, and listing in the growth of weeds and grass in the fall, produces a good result. Lands thus treated and slightly manured, appear to do quite as well for two successive years, as other lands do for one year, after one year's rest in the usual way, and having applied to them the usual quantity of manure. We further observed, that the system of planting two years in succession the same field, and thus giving the alternate field a rest of two years in open pasture, has been adopted with apparent success by two of your members—Mr. Baynard, (Prospect Hill plantation,) and Mr. William Seabrook.

Your Committee are happy to be able to state, that the provision crops are rather more than "fair." The yield of the root potato crop is above the usual average, and the slip potato crop will, in all probability, be abundant. The corn crop, contrary to the apprehensions of May and June, will yield heavily. A greater breadth of land than usual is occupied by peas; and that cheaply made and valuable provision crop, will reward its cultivators, by filling their barns and improving their lands.

In conclusion, the Committee now proceed to give their estimates of the several cotton crops, over which they rode and inspected with all due care.

(The number of acres planted by each member, and the probable yield of each plantation with other particulars, it is thought advisable to omit in publishing.)

Average of Southern section,	121 lbs.	per acre.
" Western "	146 "	"
" Northern "	133 "	"
Average of the whole number of acres planted.	134 "	"

WM. M. MURRAY, *Chairman.*

For the Southern Agriculturist.

PROCEEDINGS OF THE ST. ANDREW'S AGRICULTURAL AND POLICE SOCIETY,

On the introduction of Sea-Island Cotton into the Chinese Markets.

JAMES ISLAND, October 1, 1844.

At a regular quarterly meeting of the St. Andrew's Agricultural and Police Society, held on the 2d of July last, a letter was received and read from the Hon. Whitemarsh B. Seabrook, and referred to a Committee of the following gentlemen, viz:—Dr. Lebby, J. B. Hinson, and W. H. Rivers, with instructions to report at the October meeting.

The Committee upon Mr. Seabrook's letter, made the following Report this day, which was adopted, and ordered to be published in the "Southern Agriculturist." And the Treasurer directed to collect from the members of the Society, the assessment of five cents per acre from every member, and to receive subscriptions from residents of this Island not members of this Society, as recommended by the Committee.

Extract from the Minutes.

Æ. M. MIKELL, *Sec. & Treasurer.*

Mr. Seabrook's Letter to the President of the St. Andrew's Agricultural and Police Society.

SIR,—Allow me in a few words to bring to the notice of the Society over which you preside, a subject of much importance.—The great population of China—the ingenuity and skill of her population—the perfection which they have attained in the manufacture of certain fabrics—their fondness for dress, and the readiness with which they detect the means of furthering their personal interests, are considerations which unitedly have brought me to the

conclusion, that measures ought promptly to be adopted to introduce the long staple cotton into the markets of that empire. The quantity of that material sold to France is so small, that Great-Britain may be said to be the only purchaser. From the limited number of buyers too on account of her spinners, identified as they are in interests, a combination on their part against the planter is not only feasible, but by many is believed to be a matter of no extraordinary occurrence. The black seed grower needs competition among nations, and at present China seems to be the only one, Germany perhaps, excepted, where, if proper and judicious steps be taken, his object might be accomplished. After an interchange of views on my part with several prominent merchants of Charleston on this subject, I am induced to solicit a consultation among the producers as to the manner of proceeding. This course indeed is not only advisable, but necessary. Allow me therefore, to suggest, that the planters of the parishes do severally agree to contribute so many pounds of cotton of different qualities, as together will make fifteen or twenty bags; and that these be sold at a very reduced price to a New-York House, or given away, should the occasion require it, upon conditions set forth in an instrument of writing, to be signed by the contracting parties. The arrangement might be made through the instrumentality of one of the Charleston Merchants. It will be important, that the samples of cotton for a bag be the same. If this cannot be done, let the planters contribute in money as much as will purchase the requisite number of bags.

You will oblige me by submitting this matter to the attention of your Society, as early as possible, and to inform me of the result.

Respectfully yours,

(Signed) WHITEMARSH B. SEABROOK.

The Committee to whom the foregoing Circular was referred, beg leave respectfully to Report:—

That on entering upon the consideration of the important suggestions contained therein, their first object was to ascertain, whether any of the finer staples of Sea-Island or Long cottons had ever been introduced to the notice of the manufacturers of China, and what, if any, were the duties or import charges on the article. To obtain this information, your Committee addressed letters to several Factors and Merchants in different sections of the United States, and also to the Secretary of State of the United States.

The latter gentleman promptly replied—transmitting a copy of the treaty and supplementary treaty, entered into between Great-Britain and the Emperor of the Celestial Empire, whereby five ports, viz., Canton, Amoy, Fuchow, Ningpo and Shanghai, were

opened to the British Nation under certain regulations. The 8th article of the supplementary treaty provides for all Foreign countries, whose subjects or citizens have hitherto traded at Canton, being admitted to the five ports named in article 1st, and enumerated above, on the same terms as Great-Britain.

The Honorable Secretary remarks, "to the information contained in these papers, I can only add, that the new Chinese Tariff makes no discrimination between different qualities of raw cotton imported into that Empire. This article is admitted to entry at either of the five ports named in the first article of the treaty, upon the payment of a specific duty of 24¼ pence sterling per cwt., without reference to kind, quantity or origin." It will appear then, that there is no restriction, to prevent the introduction of the raw material into either of the ports named, upon paying the duty of about a half a cent per pound.

The next point of inquiry, whether the fine qualities of long staple cotton were known to the Chinese manufacturer, was investigated. From all the information in possession of your Committee, the short staple cotton is grown, and easily manufactured by the Chinese, and very large quantities is annually imported from India under the direction of the East-India Company, and other sections of the world, on private account. To enable you to form some idea of the short cotton trade of China, your Committee beg leave to digress a little, while they shew the extent of this trade with the Chinese. They find that in the years 1825 and 1826, the imports of cotton on account of the East-India Company, amounted to 23,324 bales; and in private trade to 120,000 bales; valued at upwards of five millions of dollars. The importation of cotton into China in years previous to the above, viz., from 1816 to 1825, were 1,255,024 bales; and from 1826 to 1829, 609,483 bales; and in 1837, to 226,000 bales—besides 5,629,849 yards of cotton goods. The British trade up to 30th June, 1837, had increased to the sum $34,900,662, exclusive of the opium trade which alone amounted to $19,471,238—making the total enormous sum of $54,371,900.

In prosecuting the inquiry, your Committee find, that the principal trade carried on by Americans with the Chinese, consists in American cotton goods, American lead, ginseng, specie, and bills of credit on London. Rice also became an article of considerable

consequence after 1830. The progress of the trade in cotton goods, however, by Americans, has been very rapid, though not always regular. For instance, in 1831–32, the quantity of British long cloths carried to China by Americans, was 56,178 pieces, and of American manufacture only 10,334 pieces. In

1832–33,	British	61,953 pieces.	Domestics	20,156	pieces.
1833–34,	"	134,100 "	"	32,743	"
1834–35,	"	71,639 "	"	53,331	"
1836–37,	"	120,000 "	"	12,100	"
1837–38,	"	1,600 "	"	117,000	"

The trade in long cloths from England, during the year last named, was carried on mostly in British vessels, which accounts for the reduced quantity; but the importation of American manufactured goods increased, and in the year 1842, and early in 1843, there were shipped for China, more than 500,000 pieces of American cottons. This large quantity of goods was carried to China under the impression, that the prospective opening of the four new ports, under the treaty exacted by Great Britain, would afford new and extensive markets. The shipments from England during the same season, of plain cotton fabrics, exceeded the previous year by 23,185,170 yards, and of colored cotton goods, 5,586,386 yards; and in fact, amounted to more than double the export of any previous year to China. The effect of this very large importation (says Mr. Forbes) into China of cotton goods, may be readily conceived; the markets were overstocked, and on 11th October, 1843, the price was so far below the cost of manufacture at Lowell and Manchester, that the goods would pay a good profit to return them whence they came. Since the date above-mentioned, the stocks were diminishing, and nothing but the high price of goods in this country prevents extensive shipments. For these statistics, your Committee are indebted to Messrs. Ellis & Mayo, for a pamphlet entitled "China and the China Trade," recently published by R. B. Forbes, Esq., for many years a merchant at Canton, but now of Boston, Massachusetts.

Your Committee are aware that many may ask, what has all this to do with sending the fine Sea-Island cotton to China? They respectfully reply, that it proves conclusively the assertion of Mr. Seabrook, that the competition in the article is so trifling, that

"Great-Britain may be said to be the only purchaser." While our neighbors engaged in growing the short staple cotton, enjoy a two fold advantage, as will be seen by the vast amount of cotton goods shipped from the United States alone, to the single port of Canton in 1838, exceeding the British by 115,400 pieces, and in 1843 a much larger amount—exclusive of a vast quantity sent to South-America and other sections of the world. Again, the decided advantage the short staple grower has, his raw material is adapted to the machinery of almost every country, where manufactures are carried on—while it is well known that England alone, manufactures the long staple, with the exception of a few French spinners. The exports of English cotton goods is principally manufactured from the short staple cotton. Her possessions in India is supplied in a great measure with this description of goods. In 1814, the export of cotton goods amounted to 817,000 yards, in 1832 the quantity of plain and printed cottons was 57,568,161 yards! and in 1843, as we gather from tables before us, the export from England to Bombay, of this description of goods, was 86,087,633 yards; to Madras and Calcutta, 107,062,054 yards—making a total of nearly 200,000,000 of yards, besides over 51,000,000 of yards sent to China; independent of the large amount sent to that market from the United States, and shipments to other sections of the world. Your Committee might avail themselves of the valuable documents before them, to point out still farther the advantages, the grower of the short staple, possesses over the planter of the long staple cotton; but they must forbear. Great-Britain, it may be said, alone possesses the art of manufacturing this staple of cotton successfully into the finer fabrics; and the Sea-Island grower is altogether dependent on her spinners for the purchase of the raw material. In a word, it is a mortifying truth, that to a great degree, the very existence of the Sea-Island cotton planters, depends upon the whims and caprices of the manufacturer of a Foreign nation; and a nation too, inimical to our peculiar institutions, and our common country—whose policy as promulgated to the world, is not to be misunderstood or misinterpreted. Will the Sea-Island, or long staple grower, remain supine or inactive, and rest satisfied with this state of things? Is it not time that we should make other friends, and endeavor to open

another channel, by which our interests may be advanced, and the product of our industry and labor, yield a greater and more certain income, than it has for years past ?

France, as Mr. Seabrook remarks, purchases so small a quantity that Great-Britain may be said to be the only purchaser. This will be seen by the following statement of the receipts and exports of Sea-Island cotton in South-Carolina and Georgia, during the seasons of 1843 and 1844, as published in the *Charleston Courier*, of 10th August last, viz :—

	Season of 1843.			Season of 1844.			Exports 1843.			Exports 1844.		
	Stock on hand, 1st Sept. 1842.	Receipts.	On hand on ship-board not clear'd.	Stock on hand 1st September, 1843.	Receipts.	On hand on ship-board not clear'd.	Great Britain.	France.	Other Ports.	Great-Britain.	France.	Other Ports.
Georgia,	121	7390	119	193	5532	57	6444	"	..	3458	62	..
So. Ca.	316	16572	701	950	13440	644	15200	1050	..	12350	2440	..
Total,	437	23962	820	1143	18972	701	21644	1050	..	15808	2502	..

From this statement it will appear that in 1843, Great Britain purchased nearly the whole crop received, except 1050 bales by France ; and about 681 bales for home consumption; a part of the latter was re shipped from Northern ports to France and England. And the present season up to this period, of the 18,972 bales received, 15,808 were shipped to Great-Britain, and 2,502 to France—shewing an increase to the French market of 1,552 bales over the last season. A much larger quantity would no doubt be purchased by the French, if the home demand of the finer muslins and laces, manufactured by that nation, were brought back and consumed among us, instead of silks and other articles, with which the Sea-Island grower might well dispense with.

But to return to our subject. Have the finer qualities of the Sea-Island cotton ever been introduced into the markets of China ? Your Committee, believe from all they can learn, they have not.

They will quote from several letters received from Factors and Merchants, the following extracts, viz :—Mr. W. M. Lawton says, "I once heard of a shipment of 300 bales of Sea-Island cotton to Calcutta, and further have learnt, that some cottons of a finer fibre

are used in China very similar to our Sea-Island; the growth of Islands in the Indian Ocean."

Messrs. John Fraser & Co., an old and very respectable house of Charleston, state, "We cannot give you with accuracy the information called for by your interrogatories, nor do we think any satisfactory result can be arrived at, except by an actual experimental shipment, as suggested by Mr. Seabrook."

Hon. Abbot Lawrence an extensive manufacturer of the United States, and well versed in the commercial transactions of almost every part of the world, remarks, "He cannot learn that any Sea-Island cotton was ever spun in China, and is decidedly of opinion that it would be well to make the shipment of twenty bales."

Messrs. Ellis & Mayo of Boston, state, "We have also conversed with several gentleman connected with the cotton trade, some of whom have made shipments of the article to China, but we do not learn from any source, that a bale of Sea-Island cotton was ever shipped to that market; on the contrary, the poorer qualities of short cotton have invariably paid the best; most of the gentleman however, agree with Mr. Lawrence, that the experiment would be worth trying."

Mr. Forbes who has resided several years in Canton, (but now of Boston,) informs us that the greatest objection the Chinese make to American cotton, is on account of the length of the staple, as they invariably prefer the shortest staple they can find—he says none of the finer sorts of cotton, such as Sea-Islands have ever gone to that market; nor does he think it would meet with much favor, unless it could be spun on their silk machines, in which case they might be induced to substitute it for silk. He thinks one or two bales would be amply sufficient to test the experiment."

Upon the receipt of this letter, your Committee propounded to Mr. Forbes through Messrs. Ellis & Mayo the following interrogatories.

What proportion of cotton imported into China, is American?

From whence do they obtain their greatest supply of cotton?

What quantity is sent by the East-India Company, or from other parts of the world?

What is the average price per pound?

In reply, he states, "There have been no regular exports of American cotton to China—small and straggling lots, have been sent from time to time, but during my experience of China, I have never known a single bale carried, but since my return from China, the low price of the staple in 1843, led me to ship 1500 bales of short staple, of an ordinary quality, costing about six cents here—it sold after a good deal of delay, at cost and charges—during the past year two cargoes expressly packed in New-Orleans for China, in 300 lbs. bales, were sent at low cost direct from New-Orleans, and they made a little better than par remittance, allowing the vessel no freight. The cotton belonged to the owners of the vessel. The bulk of the cotton grown in the Honorable Company's possessions and carried to China, is shipped at Bombay, say two-thirds; the rest goes from Calcutta and Madras—altogether 250 to 300,000 bales of 300 lbs. annually; and the average price in China, excepting the past two years, has been from 8 to 14 cents; lately it has been very low, and has not paid any profit, owing to the vast quantity of manufactured goods sent from England and the United States—for the Chinese do not want so much raw cotton, when they can get cloth cheap. The Chinese grow a great deal of cotton; for the 300,000,000 of inhabitants, cannot be clad with the goods and raw material sent from England, and her possessions in India. The export of American cotton to China, never reached 1000 bales in any year, till 1843, and none going now."

Your Committee beg leave to trespass a little longer on your time, by giving, in detail, the views of a firm, whom they have already had occasion to mention, and to whose polite attention they are much indebted for the greater part of the information in this Report. We allude to Messrs. Ellis & Mayo of Boston. In their letter of 18th July, "as to our own views upon the subject, as we have had no experience in the trade, we do not feel very competent to advise; still we are free to confess that we do not feel so sanguine, as to the results, as most of the gentleman with whom we have conversed—our reasons for doubting the result of the experiment, are, that as your Circular says the English have had no competitors in the purchase, and have in consequence bought at a low price, and as they have machinery superior to any other nation for manufacturing the raw material, and agents in every

known market in the world, we are compelled to believe if there was any possible shape into which the long-staple cotton could be made to suit the fancy of the Chinese, it would have been introduced into their markets long before this, or if there was any use to which the raw material could be put to advantage in China, we feel confident that British Merchants would have found it out, and overstocked the market years ago. We must also bear in mind, that coarse cotton has always met with a better sale than finer sorts, and that instead of the Chinese being large exporters of cotton goods, as they were formerly, they now take large quantities from England and America; and that British skill and American ingenuity are in a fair way of monopolizing their entire trade in these articles—for these reasons as well as some others, we doubt whether it would be possible for the Chinese, if disposed so to do, to compete with foreign skill in the manufacture of long staple cotton, under their present commercial regulations as to imports. In conclusion allow us to say, we should feel much more sanguine as to the final results, if a well directed effort were made to introduce a greater domestic consumption of articles manufactured from the finer kinds of cotton, and by so doing, create a home market for the raw material—and if your Societies would unite for this purpose, we can hardly conceive of a failure, if assisted by the ladies; or in other words, once create a fashionable demand for the finer kinds of cotton goods—have them take the place of silks, alpackers, and a variety of other foreign articles now so much in vogue, and rely upon it, America will soon have machinery in operation, to supply all demands; and thus create home competitors for the purchase of the raw material. You will be kind enough to excuse this rough sketch of our views upon the subject, and with the offer of our feeble services at all times in promoting so good a cause, we remain, &c. &c."

In conclusion, your Committee beg leave respectfully, to urge upon your attention, the trial of a shipment of Sea Island or long staple cotton to the Celestial Empire—believing if it is attended with no immediate benefit, the amount expended on the experiment will be no loss in the end. If on the contrary it should prove successful, our object will be attained, and a partial competition will be created for the article. It is very evident, that every exer-

tion should be made by the grower of the raw material, to create a greater demand for this description of cotton, whether it be in France, China, or the United States. In our search for information on the subject confided to us, the startling fact has been conclusively proven to your Committee, that neither the quantity of cotton made on the sea-board, nor the prices obtained for the article, are as great at the present time, as they were in years past; that is, the planter does not receive as great a return for his labor, as he did formerly. To sustain our assertion, we subjoin the following statement published by Wm. Kelly & Co. of Glasgow, and the annual statement of imports and stocks of general produce, printed in Liverpool, 31st December, 1842. Our calculations as taken from these papers, embrace a period of thirty years, viz:—1812 to 1842 inclusive, and shew the average number of pounds in every ten years, and the average prices for the same period. From 1812 to 1822, the crop received in the English markets amounted to 88,838,971 lbs., or 269,209 bales, (of 330 lbs.) and annually of 27,000 bales, commanding in the same market from 30 to 40 cents per pound. From 1822 to 1832—101,755,304 lbs., or 308,349 bales, or annually 30,834 bales, commanding a price, in round numbers, from 25 to 40 cents per pound. From 1832 to 1842—76,754,621 lbs. or 232,589 bales, or annually 23,258 bales, commanding in England from 28 to 54 cents per pound. We perceive from the above, that the quantity made in the last ten years, is not as great as the previous ten, by 7,576 bales, and the period prior, by nearly 4000 bales, and at prices not at all enhanced, considering the improved state of the staple, and its more difficult preparation for market. It is very evident, that the Sea-Island planter realised more money for the description and quality of the raw material raised during the first ten years, than he has done since.*

With these facts before us, it is plain, that the grower of the raw material, should exert all his energy to get up a competition for its consumption, it matters not whether it be in France, China, or the United States of America. To accomplish this desirable object, the planter must in a measure become the consumer, as well as the producer of his raw material; practically and not theoretically. Import more of the finer article, and "urge upon our

* It is questionable, whether the Sea-Island planter for the last five years, has realised over five per cent. on his capital.—*Memoir on the Cotton Plant.*

ladies the adoption of the finer fabrics, manufactured from our long staple cottons, as articles of fashionable dress, instead of silks, &c.;' a demand thereby for this description of goods will be created—consequently a corresponding demand for the raw material will likewise increase. The manufacturer will do more business, and receive a larger return for his industry. Capitalists seeing this, will be induced to embark more in this peculiar description of machinery, and more of our cottons will be required for use, which must enhance its value. It should be a matter of little moment to us, who are the growers, whether this outlay for machinery be at home or abroad, so long as it increases the consumption and value of our raw commodity. Do this, and your Committee are sanguine to believe, that our interests will be advanced, our object attained, and ourselves and our posterity reap the harvest. Then will the Sea-Island cotton planters of South-Carolina, rise from bankruptcy and ruin, and be enabled proudly to proclaim to the world, this is the result of our own industry—we have accomplished this by our own energy and enterprise.

Your Committee beg leave respectfully, to submit for your consideration and adoption, the following Resolutions:—

Resolved, That the suggestions of the Hon. Whitemarsh B. Seabrook, as contained in his Circular Letter of April last, are perfectly feasible and practical, and that every effort should be made by the Agricultural Societies on the sea-board of South-Carolina, to test the experiment proposed.

Resolved, That the St. Andrew's Agricultural and Police Society, will unite with the other Agricultural Societies engaged in growing the long staple cotton, to purchase six bales of the finer description of cotton, viz: two (2) bales of the very finest fibre, two (2) bales of the next finest, and two (2) bales of the next finer quality, to be shipped under special instructions direct to the port of Canton in China.

Resolved, That the cotton so purchased, shall be shipped by an American house, with a special request to their agents in Canton, that the same, should by them, be presented to the Chinese manufacturers for examination and experiment—in the name and in behalf of the Sea Island cotton growers of South-Carolina in the United States of America. And that the said agents be further

equested to obtain the opinions of the Chinese upon the article, rand the result of the manufacturing operation, in an authentic form, and transmit the same to the shippers in the United States.

Resolved, That in the opinion of this Society, the six bales of cotton to be shipped should be purchased, as affording a better opportunity of collecting an article of uniform staple and quality—which would not be the case, if the raw material was contributed by many Societies or communities.

Resolved, That the sum of one thousand dollars is necessary, to carry out the foregoing experiment.

Resolved, That in collecting the sum mentioned, your Committee respectfully recommend, that two-thirds ($\frac{2}{3}$) of the amount be collected by the planters on the Sea-Islands, and the remaining one third ($\frac{1}{3}$) by the planters on the Main.

Resolved, That the St. Andrew's Agricultural Society, respectfully suggest to the planters of the long staple cotton, that the sum of five cents per acre upon all lands planted in cotton, would be the most equitable mode, and perhaps the best, for raising the necessary sum, and of assessing it equally among all interested.

Resolved, That the St. Andrew's Agricultural and Police Society will contribute their amount to carry out so laudable an object, and they respectfully recommend, to the several societies and communities interested in this project, that the amount necessary for the purchase and other incidental expenses, be immediately collected, and deposited in the Bank of the State of South-Carolina, to the credit of the President of the State Agricultural Society.

Resolved, That the Hon. Whitemarsh B. Seabrook, is hereby respectfully requested, to take charge of the amount to be collected, and apply the same for the purposes for which it is intended; and that he request two of the most experienced Factors engaged in the Sea-Island cotton business to aid him, in the selection and purchase of the six bales above recommended.

All which is respectfully submitted.

ROBERT LEBBY,
J. B. HINSON,
W. HORACE RIVERS,
} *Committee of St. Andrew's Agr. and Police Society.*

We concur,

P. C. GRIMBALL,
JOHN S. ASHE,
E. VANDERHORST,
} *Committee of the So. Carolina Agr. Society.*

From the Transactions of the N. Y. State Agricultural Society.

INSECTS INJURIOUS TO THE FARMER AND GARDENER.

A SERIES OF ESSAYS, BY WILLIS GAYLORD.

(Continued from page 387.)

There are several species of a minute beetle—deriving their name of *Haltica* from their leaping properties—which are very destructive to cultivated plants; of which the cucumber flea-beetle, *Haltica pubescens*, and turnip or cabbage flea-beetle, *Haltica striolata*, are the most common and voracious. The first attacks the cucumber and melon plants as soon as they appear above the surface, and by devouring the seed leaves, effectually destroy their growth. This insect is black, and is justly regarded as the pest of the cucumber grower. Sprinkling with soot, lime, ashes, &c., proves but a doubtful preventive at best. Whatever is used, should be dusted on when there is dew on the plants; but at this early stage, such plants are so tender that too heavy doses of these substances are apt to be more fatal than the beetle. Watering the plants with soap-suds operates favorably, as will anything that gives additional vigor to the plants. Wetting the leaves with a decoction of intensely bitter plants, such as tanzy or wormwood, renders them distasteful to the beetles for a time, and we have found much benefit from simply scattering the green herbs over the plants on their first appearing. Where a farmer has but a few hills of cucumbers or melons, he may protect them till the rough leaf appears, by spreading a thin covering of the tow of flax over them; this is effectual until it is wet; and it may here be added that such a covering is one of the best guards, also, against the striped beetle. It is the turnip beetle described above, that infests the cultivated cresses, mustard, radishes, &c., of the garden, and the treatment in the one case will be applicable in all. Since the extensive introduction of the turnip into field culture in Europe, the best means of freeing them from the attacks of this beetle have occupied much attention, but nothing has yet been discovered which can be confidently relied upon. Forcing them through their growth of seed-leaf into the rough leaf, is found to be the surest way, and a variety of active manures, of which bone dust and guano are the principal ones, are used for this purpose. It has lately been asserted that soaking the seeds of such plants in whale oil before sowing, will protect the plant perfectly; and in the only experiment we have tried with it, owing to that or some other cause, the plants wholly escaped. A solution of whale-oilsoap would doubtless be very useful, as it appears to be extremely offensive to most insects.

The *Aphides* or plant lice, as they are usually called, present a very extraordinary as well as a numerous race of depredators.

In the garden, their most destructive effects are experienced on turnips, mustard, cabbages, and other plants allied to these. The plant louse presents many characters worthy of notice. Destitute of mouth, it lives by sucking the juices of plants through a short tube; so exceedingly prolific that it has been calculated that a single female in five generations may be the progenitor of as many millions; a single fecundation rendering the females prolific to the seventh or eighth generation; fond of society, and usually residing in dense masses or colonies; and what seems most curious of all, each aphis is a living manufactory, in which the crude juice of the plant on which it feeds, is converted into a clear sweet substance resembling honey, which it ejects at pleasure from two tubes near its hinder extremity, and on which multitudes of flies, wasps, ants, &c., feed at their leisure. The plant lice usually fix themselves on the under side of the leaves of the plants they choose, and the leaf soon shows the influence they exert, in its curled and discolored appearance. There are some kinds of plant lice that attack the stems of plants beneath the surface, and destroy them before their presence is suspected. On radish and mustard, the colonies generally fix on the rapidly growing and tender stalks rather than the leaves, while on the cabbage and turnip it is the latter that are attacked. The cabbage aphis is easily distinguished from the other kinds, by its singular mealy appearance and its greasy feel.—Tobacco water, alkaline solutions, such as lye or soap-suds, and even hot water, have been reported as remedies for the aphis. On any plant over which a tight box or barrel can be turned, plant lice may be readily killed by fumigations with sulphur or tobacco. We have killed them on the branches or stems of plants or trees, by holding them in soap-suds; if too strong, however, it burns tender shoots. But much the best remedy we have ever tried, where garden vegetables are concerned, is to keep a sharp look-out for their earliest appearance; and when a colony is discovered, to pluck the leaf at once and crush the whole under the foot. The appearance of the plant is a sufficient guide to detect the aphis, and as they multiply with astonishing rapidity, the destruction of a single colony in the outset, frequently saves much labor or perhaps the entire destruction of the plants. Fortunately there are several insects harmless to vegetation that prey on the aphis and greatly reduce their numbers; and there are several of the smaller birds, the yellow bird in particular, that render the gardener good service by feeding upon them.

The wireworm, the larvæ of the *Elater lineatus*, is frequently very troublesome in gardens, where it feeds on the roots of various plants, and frequently destroys them wholly. The true wireworm is well figured and described in Kollar's treatise, and we have had abundant opportunity of identifying both the perfect insect and the larvæ. It is in this country more destructive to the Indian corn than perhaps any other vegetable, though it occasionally makes

great inroads on potatoes. We have sometimes seen six or eight sticking out from different sides of a potato, or from that part of the stem of corn below the surface. Old meadows, if turned over and planted to corn, are more liable to suffer than other soils, as the perfect insect finds a refuge and a place to deposite its eggs among the grass. In 1836 we turned over a meadow which had been in grass many years—rolled, harrowed, and planted it to corn. The seed had scarcely been deposited ere it was attacked by the wireworm, and in many of the hills some three or four of the worms might be seen feeding on a single kernel. Some came up, but the appearance soon convinced us we had nothing to hope from our corn; and the field was replanted between the corn rows with potatoes. These fared but a little better for a time than the corn, as in the parts of the field where the worm was most numerous, the potato seed, in about a week, more resembled pin-balls, from the worms sticking in them on all sides, than potatoes. Still, from the inherent vigor of the roots and their rapid growth, the greater part escaped total destruction, and about 160 bushels per acre were gathered in autumn. There are many worms that go by the general name of wireworm among farmers, but the true one, or the larvæ of the *Elater lineatus*, is readily distinguished by its deep yellow brown color, and by having on the last segment of its body two minute black spots. It makes great ravages among the roots of plants, but is generally more destructive in the field than the garden, owing to the soil of the latter being more frequently disturbed than that of the former. For the same reason, this insect is less troublesome on lands subjected to a regular rotation of crops, than on those where the plough is less used and the fields lie long in meadow or pasture. Deep ploughing late in autumn, or a summer fallowing, is the most effectual remedy for the wireworm. When crops are attacked, such as corn or grain, there is no known remedy that can be relied upon. Sowing with salt has been recommended, but it must be recollected that most applications to the soil, if sufficiently active to destroy worms, will also be fatal to vegetation.

The "*Pea Bugg*," as the insect that infests the pea is commonly called, is the *Bruchus pisi* of the naturalist, and is well known in this country from the ravages it commits on the pea, both in the field and the garden. The perfect insect is found in peas that have been kept over the winter. On examining seed peas, some will be found with small holes in them, and in such the beetle is found or has just escaped. As soon as the pods are formed on the growing plant, the insect pierces the young pod, deposites its egg in the seed, and in a few days a little white grub becomes visible on the external surface of the pea. It soon burrows in the seed, on which it lives and thrives, and obtains its full size about the time the pea arrives at maturity. In its hole it changes to a pupa, remains during the winter in this state and emerges in the spring.

ready to commence the work of destruction as soon as the sown pulse is sufficiently advanced for its purpose. Sometimes they become so numerous as almost to destroy the entire crop, and are generally present more or less. Well has Dr. Harris remarked that "few persons, while indulging in the luxuries of early green peas, are aware how many insects they unconsciously swallow." There are several ways in which the ravages of this insect may in a great measure be prevented, all of which are based on the plan of having the seed free from them when sown. As the infected seeds are lighter than the sound ones, throwing the seed into water before sowing will separate many of them. Putting the seed in hot water for about two minutes will kill the bug and not injure the pea. Late sowing will frequently save the crop, as the period of the beetles attack is quite limited. Sown after the 10th or 15th of June, they are rarely disturbed to any extent. But after trying all these methods, the one we prefer is to use peas for seed that are two years old, or have been kept over one season. Deane recommends keeping them over in *close vessels*, but this is of no use so far as the crop to be grown from them is concerned. As the insect comes to maturity and emerges the first spring, after they have escaped the pea is clear and no insect will ever proceed from them. If those who cultivate the pea, either in the field or the garden, would pay a little attention to freeing their seed from the insect for a few seasons, or even for a single one, it would soon cease to produce the extensive injury it is now known to inflict. There is one kind that attacks the bean, but they are very rare in this country.

The cabbage, turnip, &c., but more particularly the cabbage, are occasionally infested with caterpillars, which produce great injury, in some instances nearly destroying, when unchecked, the whole crop. One of these depredators is a caterpillar, "bluish "green, thinly haired and sprinkled with black dots; having a "yellow stripe on the back and the same on the sides." *(Kollar.)* "Another is a caterpillar "of a dull green, with fine white minute "hairs, a yellow stripe on the back, and yellow spots on the sides, "on a pale ground." *(Kollar.)* Another caterpillar "is green, "more or less covered with grey or black. There is a dark stripe "on the back, on which there is a pale indistinct line. Above, it "is sometimes furnished with dark or pale spots placed lengthwise. "At the sides is a dirty yellow stripe, which becomes reddish "above." *(Kollar.)* There are several others that may be found on the cabbage and turnip at times, but these are the most common and destructive. Some of these caterpillars are the larvæ of butterflies, and the others of moths, which deposite their eggs on the vegetables, and these hatching give rise to the multitudes of worms which at times so suddenly show themselves. With all insects of this kind the better way is to gather the leaves on which the colonies appear, and destroy the whole at once by burning or crushing.

For some time all the worms remain together, and if the leaf is removed on which they are hatched, before they find it necessary to scatter in search of food, their destruction is an easy matter. If a broad cabbage leaf is selected and placed over the head of a plant infested by caterpillars, on removing it in the morning, a large part of them will usually be found collected on it, and may be then killed. If they have left the plant, they may be picked off from the leaves on which they are feeding elsewhere, and killed singly. As there are usually two or more crops of these insects in a year, destroying the first that appear, frequently prevents a prodigious increase.

As there is scarcely a cultivated plant in our vegetable gardens on which one or more insects do not prey, a complete notice of them all, even were the writer competent to such an undertaking, would far exceed the limits of a mere essay. Such only have been selected as produce the most mischief, and the understanding of the habits of which are of the most consequence to the farmer.

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Section II. *Insects injurious to Field Crops.*

Destructive as insects unquestionably are in the garden, the damage they there occasion is but a tithe of that they influence in the field, where they frequently destroy the hopes of the husbandman, blight his prospects of harvest, and not only prevent all profit but cause a loss of all the hard toil he has expended in the culture of his crops. It is to be much regretted that so little attention has been paid by men of science in this country to *our* depredating insects. That they frequently differ in appearance from those known by the same name in Europe is certain, in many cases; and it is fair to infer that their habits and modes of destruction may be also different from theirs. The man who shall furnish the farmers of the United States with a full account of the different insects that prey on our wheat crop, its roots, stems, leaves and seeds, will render the agriculture of this country a service entitling him to more gratitude and securing him a more certain claim to a long and honorable remembrance, than could be acquired by the most brilliant political, diplomatic or literary labors. The thoroughly educated entomologist can alone do this, and it is a work requiring years for its successful execution. The farmer finds his wheat crop cut off year after year, and he knows the injury is done by an insect; but his knowledge of insects, their habits and transformations, is too limited to enable him to observe and describe correctly, and it is not to be expected it should be otherwise. The labor must be performed by the professed entomologist, aided in his observations by the farmer, or it will never be done at all; and when it is remembered how essential such a thorough examination

of the insect that prey on our field crops, those of grain in particular, is to the agricultural prosperity of our country, it is to be hoped the investigation will not be much longer delayed. Until such full accounts and descriptions are given, the most that can be done is to collect such facts as shall best enable the farmer to know his enemies and avoid or destroy them.

In a notice of the insects injurious to field crops, those that attack wheat are, perhaps, deserving the first place; not only from the value of the grain itself, but from the extent of the damage they sometimes occasion. Of the insects that prey upon wheat, the one that effects the most wide-spread injury, is the Hessian fly, *Ceridomyia destructor* of Say. This insect is a fly about one-tenth of an inch in length, with wings expanding one-quarter of an inch; in this respect, however, a trifle of difference may be observed. The head and thorax are black, the hind part of the body tawny, and the wings blackish; round at the ends and fringed with short hairs. Perhaps there are few insects whose history, habits and transformations have been more controverted than this. Some of the best descriptions of this insect may be found in the American Monthly Magazine, by Dr. Akerly, in Say's Entomology, in Silliman's Journal, Vol. 41, and in the "Cultivator" for May, 1841. In Dr. Harris' work on Insects, this insect is very satisfactorily treated, and its history given with much correctness. There is no account of the Hessian fly in this country previous to the Revolution, and as it first appeared in those districts where the Hessian or German troops had their residence, it was supposed to have been brought by them, and hence its name. European entomologists for a long time contended the name was incorrect, that no such insect was known on that continent, and that it was strictly American; but the researches of Kollar, and the evidence furnished by Mr. Herrick for the Journal of Science, of its existence in France and Minorca, would seem to render it probable that the first impressions of its origin were correct, and that these foreign mercenaries introduced it in the straw of their baggage, a thing very possible if its existence abroad be admitted. We have paid much attention to the habits of this insect, and for the most concise, as well as accurate description we have ever yet seen, must refer to the paper furnished the "Cultivator" in May, 1841, Vol. 8th, by Mr. E. Tilghman of Maryland. The substance of the same paper may be seen in Dr. Harris' work on Insects, page 425. Our observations, as well as those referred to, establish the following positions:

That the Hessian fly usually, if not invariably, deposits her eggs on the blade or leaf of the wheat. Some have asserted that the fly deposits its eggs in the ear of wheat, but this would not seem to be the usual time of its appearance, and the writer has never detected the fly on the ear:

That the worm when hatched makes its way down the blade, to its junction with the stem. The worm itself is slightly reddish, and may be seen in its progress. The position of the worm is with the head always towards the root of the plant:

That they do not eat the plant, but suck out its juices; and as they grow hard and increase in size, they become imbebded in the green stem of the plant, somewhat resembling in this flattened state, a flax seed in size and color:

That one larvæ will produce little effect on the stalk, but when three or four, or even a greater number are about one stem, they destroy it. The first evidence of the fly in wheat is an unhealthy yellow color about the time of earing, and this is followed in a greater or less degree by falling of the stem as they become more and more weakened:

That there are two generations of the perfect insect in a year; one of which deposits its eggs in the autumn wheat, where the larvæ is matured and passes into the pupa state for the winter; of this generation, the perfect insect appears in May or June, and deposits its eggs on wheat sown in the spring, or, if the insect makes its appearance sufficiently early, on the latest winter wheat. The several changes are passed, and the perfect insect emerges usually in October, to again attack the September sown grain.

Miss M. H. Morris, of Germantown, Pa., in a late communication to the American Philosophical Society, states that she has been for several years investigating the habits of this insect, and has arrived at the conclusion that the egg is deposited in the seed. Sown with the seed, the larvæ is produced within it, and ascends within the young plant to its usual position between the root and the third joint. The substance of Miss Morris' researches were communicated to the Philadelphia Agricultural Society, by Dr. Coates, and, with the remarks of a committee, may be found in the Farmers' Cabinet, Vol. 5, page 201. From this statement of Miss Morris, it would seem that all that is necessary to free the wheat-crop from the fly, is to obtain seed from districts where it has not yet appeared, or where the crop from which the seed is taken was free from the insect. Unfortunately for the theory, such is not the result in practice, as may be seen from a paper in the Cultivator for August, 1841, furnished by Mr. Bergen of Long-Island.

In avoiding the ravages of the Hessian fly, much is depending on the variety of wheat sown. Those kinds that have the thickest hardest stems suffer the least, as such best resist the pressure of the insect. Hence the Mediterranean wheat is valuable, rarely being injured to any considerable extent. Any thing that has a tendency to give a quick and vigorous growth to the wheat plant, acts favorably, by better enabling it to resist the exhausting action of the larvæ. Steeping the grain in brine, and drying it in lime, guano, or other substances that act by giving a rapid growth, have

been tried with success. It is probable that sowing the fields with powdered quicklime, at the time the insect is depositing its eggs, would do good, as experience shows that wood ashes sown at these times certainly do. As the insect, in some of its stages, must be in the stubble after the wheat is gathered, it would seem reasonable that burning the stubble, where practicable, would destroy thousands, and experience shows that such is the case ; and this burning, particularly if followed by a ploughing, is doubtless the most effectual preventive yet discovered. Were not the practice likely to be injurious to the grain, feeding close late in the fall, would be very advantageous, but this course is one the farmer would not be willing to adopt unless the danger from the fly was most imminent. But the most effectual check to the multiplication of the Hessian fly is found in several parasitical insects that prey upon them in all their stages of egg, larvæ and pupa. According to Mr. Herrick, whose valuable paper may be found in Silliman's Journal of Science, Vol. 41, page 156, more than nine-tenths of every generation are destroyed in this way.

[To be Continued.]

For the Southern Agriculturist.

FENCES—STOCK—MANURE.

In some parts of the State, timber is becoming so scarce, that it will be a serious question, how we are to provide fences for our fields. Many kinds of live fences have been suggested and recommended. I have never seen one of any great length in any country, that would turn a vicious hog ; I have my doubts whether any can be made that may *be relied on*, and I am sure that none can without vast trouble and expense, and many years of unremitted perseverance. Ditches are but little better—being equally unsafe and expensive. What is to be done then? I suggest, that instead of fencing our fields, we fence our *stock*. There are few farmers who have not a mile, many twenty miles or more of fencing to keep up, while a few hundred rails or feet of plank, will fence their stock in securely. The ready objection is, that we can not raise stock without range or pastures. Let us see. It is stated by an experienced breeder that a hog may be kept in thriving condition on an ear of corn per day. I am sure he may be on two ears. And if they are crushed and boiled, he will fatten rapidly. Seven hundred and thirty average ears of corn will not

make over six, or at most six and a half bushels of corn, which will be his yearly allowance—say ten bushels to feed him until eighteen months old. It is a good hog that will at this age, with our common treatment, weigh 150 lbs. nett. If fed in a pen, well watered and supplied with rotten wood or charcoal, which cost nothing, I will guarantee that he will weigh 200 lbs. The pork, therefore, including the cost of attention, will not be but three cents per pound. Do we raise it cheaper now, when we consider that we have to keep so many sows more, than we should on this plan, to ensure a sufficient number of pigs; that we lose so many shotes by the accidents of the range, and that we have to feed thin hogs so bountifully for a month or six weeks before killing? But there are other important considerations. We might with this system keep only the improved breeds, and by such steady feeding secure all the benefit of the improvement which is lost, when we turn them into the woods.

An accurate and very judicious farmer in Virginia, estimates that a hog well littered and properly fed, will make 250 bushels of *good manure* per annum; and hog manure is, we know, at least twice as valuable as stable manure. Now, how much corn will 250 bushels of good hog manure, put upon two or three acres, increase the corn crop? At least twenty bushels—probably much more. Here then you have a return of twenty bushels for six half fed, or certainly for ten fed---giving you 200 lbs. of pork, and leaving you ten bushels, to remunerate you for feeding, littering, and hauling out and spreading your manure. At this rate, I am not sure—paradoxical as it may appear—that a farmer would not make by feeding his neighbor's hog for the manure, and returning him his hog when ready for the knife. I am positively sure, that he will find it far more profitable to pen and feed his own, than to give them the best range and pastures.

And now that we *must plant corn largely*, because we *cannot plant cotton* at present prices, I hope the experiment will be generally tried. I believe that the same thing would be true as regards cattle, if the best breeds were selected, a dairy established wherever it is attempted to raise them, and their manure carefully saved. Our winters are mild; cattle standing still require much less food than those ranging at will; our shocks, pea-vines, potato and pin-

dar vines, and crab and crow-foot grasses, afford an incalculable amount of forage, which we may secure if our cotton crop is light. And our Indian corn is a treasure for feeding stock, which, in our propensity to imitate every thing foreign, and to introduce grasses which our hot and dry summer will not allow to flourish, we overlook too much. It is worth all the grasses in the world. Every inch of it from root to tassel is rich in nutriment; cured and cut, its stalk is equal to sugar beet; and the cob, shock and grain, ground together and boiled, is as good as any equal amount of food known —oil-cake scarcely excepted.

If then we turn our attention to it, we shall find that we can raise stock for our own use, and also for market *in enclosure*, as well or better than it can be done in any other country; and what a world of rail splitting it would save—of fence making, and fence mending—of corn destroyed and potatoes rooted in despite of all we can do. And how many violent and sometimes fatal quarrels among neighbors would be prevented. Perhaps the most fruitful source of bickering and open war in every neighborhood, is the lawless incursions of stock upon foreign domains. In Europe and in some parts of America, stock are mostly enclosed. On the other continent, there is rarely a pretence of a fence or hedge, and in England hedges are of little real use. They would be of none against *our* swine and cattle, which are mostly of the "Liberty Boy" breed.

It may seem premature to talk of enclosing here. I do not think it is. I believe it would be profitable wherever manure is wanted; and I think few will deny that want here. I enclose for profit, though I have to keep fences against my neighbors stock, the value of which would purchase my meat for five years to come. I invite planters to consider the matter. HOLKHAM.

For the Southern Agriculturist.

EMASCULATED SQUIRRELS.

The opinion was very general some years ago, and I believe is still entertained by many, that some of the male squirrels are emasculated when very young by their parents. The appearance of these males would certainly justify such belief, if not considered a

deviation from the natural affection with which animals cherish and protect their young. In my youth, I was induced to believe the representation, and was not satisfied with the only other explanation then offered, viz :—that this appearance was produced in the savage combats, which sometimes took place in the spring and summer, between male squirrels, for some particular females. I do not doubt that the parts in question may sometimes be wounded in these contests, as well as other parts of the body, and admit that such wounds may have been seen, but I never saw or heard of a male squirrel in the spring and summer months, which appeared to have been altered by any means whatever. I have since been told, that naturalists account for this appearance, alleging that they, like rats, have the power to draw up these parts from the sack into their bodies at pleasure. I have seen this done on one occasion, and do not doubt that other male squirrels do so occasionally, but the appearance was widely different from that of the many seen, and supposed to have been emasculated. The sack was still distinct, flaccid dark colored and without hair. When a boy, I killed two squirrels at one shot, apparently emasculated, in our Christmas holidays, and even then observed, that none of that appearance were ever seen in our spring vacations. I compared them also, side by side, with other males that were not defective, and perceived a marked difference between them, the former being smaller than the latter, particularly in the thighs or hams. I reflected also, that if emasculated, they would probably like other animals, have heen the largest, at least in the length of their limbs.

I now began to suspect, that the appearance existed only in young males not yet mature, and that the change took place in the spring when adult, and inspired by nature with desires to propagate their species. I afterwards learned, that in the human male infants, these parts were not discoverable, until protruded by the struggles and pains of childbirth. I could not but reflect, that if the young Bucks of our own species, had been made a little more like the young Buck squirrels, and not mature until lawfully of age, that they would be spared from many an unpleasant dilemma, perhaps other people too.

But these are only speculations; I afterwards heard of a squirrel apparently mutilated, being a pet in a family, where he was highly prized and cherished, because of his very neat delicate appearance. The winter passed over, and in the spring the scene was changed—the ladies were astonished at the indecent appearance of their late favorite, and it was determined that he must either wear "unmentionables," or be discarded like some other amusing creatures or quandum favorites.

The season is now propitious, let some of your friends institute the experiments, and report to us next summer the results. Z.

SIRUP FROM CORNSTALK, &c.

We have on our table a specimen of marl or limestone, shown us by our enterpising and intelligent citizen, Mr. James S. Pope, which was found in the eastern part of this district.

And also, by the same gentleman, we have been presented with a beautiful specimen of Sirup (or Molasses) made by himself from the earless stocks of Indian corn, the remnant of a roasting-ear patch.

We also learn with pleasure, that he has been very successful in raising two-thirds of a Florida crop of Sugar cane on upland.

These experiments, added to his success in breeding fine horses and other stock, go to prove beyond a doubt, that whether we are compelled or not, the enterprising and industrious farmer of Edgefield can live as free and as independent of foreign resources, as any people on the globe. [*Edgefield Advertiser.*

EDGEFIELD DISTRICT, September 18, 1844.

Mr. Editor,—I promised not long since, to furnish you some particulars in relation to my experiment in making sirup from the cornstalk. I had about two acres planted in corn for my experiment, in the month of March last. The land selected was originally a highland pond, or at least a large portion of it, and rather damp for planting so early. The consequence was, that the stand was considerably injured by the cut-worm, and had to be re-planted. The corn was planted in drills, three feet wide, slightly manured with cotton-seed, ploughed twice and hoed but once. I directed, about the middle of June, for all the shoots to be stripped and given to the horses for food. The object in stripping the shoots was to prevent the growth of the ear, so as to enable the stalk to retain all the saccharine juice. I was informed by the boy, who attended the horses, about a week afterwards, that as the shoots were stripped, others soon appeared at the other joints,

owing no doubt to the luxuriant sap in the stalk. I then came to the conclusion not to have the shoots immediately stripped, but to strip them as needed for food, and get the full benefit of them. I then directed for my mules, as well as horses, about twenty head, to be regularly fed from the shoots.

Though feeding thus bountifully, a great many of the shoots grew into roasting ears, which were freely used by the family, besides furnishing my stock of horses and mules with a sufficiency of food for about five weeks. The sap by this time became fully ripe for my experiment, and in fact I rather delayed it too long, as the stalks began to fire. After saving the fodder, the land yielded 17½ gallons, of what I call good sirup, to the acre. I present you a specimen for your own taste, and then you will be better calculated to judge of the article. I also present you two specimens of shell marl, which I found not long since on the lands of Major Tillman Watson, near Peter's Creek, on the old Charleston road.

Yours, respectfully,

JAMES S. POPE.

BEET SUGAR.

A few years since, it will be recollected, much was said of this article; and very many attempts were made to introduce its manufacture among us. Those who attempted it know why it was given up; but the public generally were aware only, that the subject went out of vogue, without their having any very distinct ideas of the reason. In Liebig's Familiar Letters the following observations occur, which will afford all the light necessary on this subject—and some to spare for similar projects. [*Prarie Farmer.*

"The history of beet-root affords us an excellent illustration of the effect of prices upon commercial productions. This branch of industry seems at length, as to its processes, to be perfected. The most beautiful white sugar is now manufactured from the beet root, instead of the treacle like sugar, having the taste of the root, which was first obtained; and instead of 3 or 4 per cent., the proportion obtained by Achard, double or even treble that amount is now produced. And notwithstanding the perfection of the manufacture, it is probable, it will ere long be in most places entirely discontinued. In the years 1824 to 1827, the prices of agricultural produce were much lower than at present, while the price of sugar was the same, At that time one malter* of wheat was 10s., and one klafter† of wood 18s., and land was falling in price. Thus,

* Malter—a measure containing several bushels, but varying in different countries.

† Klafter—a cord, a stack, measuring six feet every way.

food and fuel were cheap, and the demand for sugar unlimited; it was therefore advantageous to grow beet root, and to dispose of the produce of land as sugar. All these circumstances are now different. A malter of wheat costs 18s., a klafter of wood 30s to 36s. Wages have risen, but not in proportion, while the price of colonial sugar has fallen. Within the limits of the German commercial league, as for instance, at Frankfort-on the-Maine, a pound of the whitest and best loaf sugar is 7*d.*; the import duty is 3½*d.*, or 30s. per cwt, leaving 3½*d.* as the price of the sugar. In the year 1827, then one malter of wheat was equal to 40 lbs. weight of sugar, while at present that quantity of wheat is worth 70 lbs. of sugar. If indeed fuel were the same in price as formerly, and 70 lbs. of sugar could be obtained from the same quantity of the root as then yielded 40 lbs., it might still be advantageously produced; but the amount, if now obtained by the most approved methods of extraction, falls far short of this; and as fuel is double the price, and labour dearer, it follows that, at present, it is far more advantageous to cultivate wheat and to purchase sugar.

"There are, however, other elements which must enter into our calculations; but these serve to confirm our conclusion that the manufacture of beet root sugar as a commercial speculation must cease The leaves and residue of the root, after the juice was expressed, were used as food for cattle, and their value naturally increased with the price of grain. By the process formerly pursued, 75 lbs. weight of sugar were obtained from 100 lbs. of beet root, and gave 5 lbs. of sugar. The method of Schützenbach, which was eagerly adopted by the manufacturers, produced from the same quantity of root, 8 lbs. of sugar; but it was attended with more expense to produce, and the loss of the residue as food for cattle. The increased expense in this process arises from the larger quantity of fuel required to evaporate the water; for instead of merely evaporating the juice, the dry residue is treated with water, and we require fuel sufficient to evaporate 106 lbs. of fluid instead of 75 lbs., and the residue is only fit for manure. The additional 3 lbs. of sugar are purchased at the expense of much fuel, and the loss of the residue as food for stock."

VINEGAR IN THE SUGAR BEET.

Mr. A. C. Holt, in the Detroit Farmer, gives the following method of obtaining vinegar from the sugar beet:—"The last season I grated about a bushel of the sugar beet to a fine pulp, and pressed the juice therefrom, of which I obtained six gallons. I put the same in a vinegar barrel, which was entirely empty, and in less than two weeks I had as good and as pleasant vinegar, as I ever obtained from cider, and was equally as strong and clear."

ROTATION OF CROPS.

The following principles are laid down by Chaptal for a rotation of crops :

I. All plants exhaust the soil. They are partly supported by the earth, the juices from which constitute an important part of their nourishment.

II. All plants do not exhaust the soil equally. Air and water help to nourish them ; different kinds of plants require the same nourishment in different degrees.

III. Plants of different kinds do not exhaust the soil in the same manner. Plants with spindles or tap roots draw nourishment from layers of soil in contact with the lower part of the root, while those whose roots are spread near the surface exhaust only that part of the soil.

IV. All plants do not restore to the soil either the same quantity or the same quality of manure. The grains exhaust a soil the most, and repair the injury the least. While some leguminous plants restore to the soil a great portion of the juices they receive from it.

V. All plants do not foul the soil equally. Plants are said to foul the soil when they promote or permit the growth of weeds.—Plants which have not large leaves, fitted to cover the ground, foul the soil.

From the above principles the following conclusions have been drawn :

1. That however well prepared the soil may be, it cannot nourish a long succession of crops without becoming exhausted.

2. Each harvest impoverishes the soil to a certain extent, depending upon the degree of nourishment which it restores to the earth.

3. The cultivation of spindle, or tap roots, ought to succeed that of running and superficial roots.

4. It is necessary to avoid returning too soon to the cultivation of the same, or analogous kinds of vegetable, in the same soil.

5. It is unwise to allow two kinds of plants, which admit of the ready growth of weeds among them, to be raised in succession.

6. Those plants that derive their principal support from the soil, should not be sown, excepting when the soil is sufficiently provided with manure.

7. When the soil exhibits symptoms of exhaustion from successive harvests, the cultivation of those plants which restore most to the soil should be resorted to. [*American Farmer.*

TURNIP FLY.

L. B. Parsons, says the New Genesee Farmer, soaks his ruta baga seed in tanner's oil ; and then rolls it in plaster. The odor keeps away the insects. A small quantity of oil answers the purpose.

TABLE OF SOILS.

Thaer, a very eminent agricultural writer, one who is of received authority, thus classifies various soils and their adaptations to the several crops enumerated—from which persons who may be improving their lands, may judge of the quantities of manures, vegetable, animal and mineral, necessary to be applied, having first ascertained, by analysis, the constituent elements of which their lands to be improved consist of.

Systematic Names.	Usual Name.	Clay, per cent.	Sand, per cent.	Humous per cent.	Lime, per cent.
Humous Clay Soil,	Strong Wheat Soil,	74	10	4½	11⅓
Strong Humous "	" " "	81	6	4	8 3/3
" " "	" " "	79	10	4	6½
Rich Marley "	" " "	40	22	36	4
Humous loose "	Meadow or green pasture soil,	14	49	10	27
Humous sandy "	Strong Barley Soil,	20	67	3	10
Rich Clay "	" Wheat "	58	36	2	4
Marley "	Wheat "	56	30	1	2
Clay "	" "	60	38	2	2
Loamy "	" "	48	50	2	2
" "	" "	68	30	2	2
" "	1 Class Barley "	38	60	2	2
" "	2 " " "	33	65	2	2
Sandy Loam "	2 " " "	28	70	2	2
" " "	Oat "	23½	75		1½
Loamy Sand "	" "	18½	80		1½
" " "	Rye "	14	85		1
Sandy " "	" "	9	90		1
" " "	6 years Rye "	4	95		¾
" " "	9 " " "	2	97½		

Average small quantity lime.

PRICES OF GUANO IN ENGLAND.

In looking over Sheffield & Rotheram's Price Current, as published in the Independent of July 6, 1844, the following prices obtained for Guano, and we refer to them now, as the article is becoming to be inquired after by our agricultural brethren, and from present appearances there will be a demand, to a considerable extent, for the article the present season, and we are gratified to state, that there is and will be a moderate *supply* in the Baltimore market, a cargo having already arrived here and another being expected. To recur to the prices in England:

Guano (Peruvian) under 1 ton, 14*s.* per cwt.
" " from 2 to 5 tons, 13*s.* 6*d.* per cwt.
" " from 6 to 10 tons, 13*s.* "
" " from 10 tons or upwards, 12*s.* 6*d.* per cwt.
" African 10*s.* 9*d.* per cwt. or £10 5*s.* per ton.

It will thus be seen, that in England, where the use of Guano, as a manure, is now in full blast, and where it enjoys great popularity, that there is a marked difference in the prices of Peruvian and African Guano, a difference arising out of the superiority of the one over the other, as tested both by the experience of farmers, and by the analyses of chemists. [*American Farmer.*

METHOD OF TESTING GUANO.

A very simple mode of testing the genuineness of Guano is, to dissolve a small portion in Hydrochloric Acid, (Spirits of Salt) diluted with four times its weight of water. The salts of the genuine substance will be readily dissolved, they being all soluble as well as the bone dust it contains in this acid, whereas other substances, from their not being acted upon by the acid will sink to the bottom, or be precipitated, in the language of chemistry.

Pure Guano is of a light brown color, and is mixed with small portions of white substances here and there, which on being crushed between the fingers will appear like minute pieces of chalk, and which will be found to consist of fish bones. [*American Farmer.*

MANURING WITH LOAM AND CLAY IN A ROASTED STATE.

Professor Chas. Sprengel recommends burning or roasting clay for manure. After alluding to the idea, that is by some entertained that the use of burnt clay would render the use of dung superfluous, he says :—"Although this assertion is not borne out by fact, still it cannot be doubted that by roasted clay or loam one substance is conveyed to the soil, which is a most important ingredient of dung, viz: nitrogen. Because, if a loam or clay is roasted, which contain already protoxide of iron or manganese, or in which these substances are formed during burning from the oxide of iron or manganese, ammonia will be formed the moment that water and the nitrogen of the atmospheric air have access, as the protoxides of iron and manganese decompose the water and combine with its oxygen into an oxide, by which the hydrogen will be set free, which will then unite with the nitrogen of the air into ammonia, the latter being either condensed in the pores of the clay, or received by the moisture which is at hand. That this process really takes place, I have found by many experiments, on which account I recommend that sort of clay or loam for roasting which are rich in

iorn or manganese. A calculation made by me shows, that if the clay or loam used for the manuring of one acre contains 1000 lbs. protoxide of iron or manganese, there is a possibility that 100 lbs. of ammonia will be formed, which (as we know already) will produce a great effect." [*Albany Cultivator.*

DECAY OF PEACH TREES.

A singular fact and one worthy of being recorded, was mentioned to us a few days since by Mr. Alexander Duke, of Albemarle. He stated, that whilst on a visit to a neighbor, his attention was called to a large peach orchard, every tree in which had been totally destroyed by the ravages of the worm, with the exception of three; and these three were probably the most thrifty and flourishing peach trees he ever saw. The only cause of their superiority known to his host, was an experiment made in consequence of observing that those parts of worm-eaten timber into which nails had been driven, were generally sound. When his trees were about a year old he had selected three of them and driven a tenpenny nail through the body, as near the ground as possible; whilst the balance of his orchard had gradually failed and finally yielded entirely to the ravages of the worms, these three trees, selected at random, treated precisely in the same manner, with the exception of the nailing, had always been vigorous and healthy, furnishing him at that very period with the greatest profusion of the most luscious fruit. It is supposed that the salt of iron afforded by the nail is offensive to the worm, whilst it is harmless, or perhaps even beneficial to the tree. [*Southern Planter.*

GALVANIC EXPERIMENT ON POTATOES.

Mr. Ross, of Ravenswood, presented at a meeting of the New-York Farmer's Club, on 2nd of July, some potatoes measuring seven inches in circumference. He planted the seed potatoes on the 5th of May last, using leaves only for manure. To three rows of two hundred feet in length he applied at one end a plate of copper, and at the other one of zinc, both about five feet long, and connected the two plates by a copper wire supported on an adjoining fence, so that, with the moist earth of the three rows, the electric circuit was complete. All the potatoes of the field were planted at the same time; but having no galvanic apparatus, have small potatoes of the size of peas. I removed all the blossoms from all the potatoes, and the stems and leaves are all much alike; so that this enormous difference in the tubers is due to galvanism.

[*N. Y. Farmer and Mechanic.*

NEW KIND OF CABBAGE.

Mr. John Lossing showed us the other day, what he calls a *Roman Cabbage*. The variety seems to possess some peculiarities. It is more solid, and heavier in proportion to its bulk, than any we have seen. It also grows very quick. The head shown us, weighed twenty pounds on the 20th of July. Its shape is oblong, and much pointed at the top. It is said to keep better than any other cabbage. The seed was brought into the country by some Germans. [*Albany Cultivator.*

SUBSOIL PLOUGHING.

Its efficacy in actually improving the character and depth of soils where proper tillage has been maintained, has been abundantly proved, and perhaps nowhere more signally than in resuscitation of the sterile lands, exhausted by tobacco culture, in Virginia. I speak from my own observation of its wonderful utility in a neighboring country—Fairfax—and have the corroborating testimony of the distinguished Judge of that circuit, who declared some time since, that Fairfax, from being proverbially one of the poorest, was fast becoming one of the most fertile counties of Virginia; and this change has been wrought by the immigration of Northern farmers, bringing with them all their agricultural enterprise and knowledge of what may be properly called the mechanics of agriculture.

C. G. PAGE.

[*N. Y. Farmer and Mechanic.*

A HINT.

Don't suffer your revolving hay-rake, and your wagon rack, and hand rakes, and whatever else you have used in the haying and harvesting just finished, to lie out in the fields exposed to the weather, but see them well housed for another season. The weather destroys more tools than hard work, with some farmers; and more valuable time is lost hunting up and repairing lost implements, than their original cost. [*Albany Cultivator.*

CUTTING TIMBER.

Mr. BUCKMINSTER,—*Sir*: One fact I wish to state with regard to the time to cut timber. I am satisfied from actual observation, that timber cut in the month of June, and perhaps July, will last twice, if not four times as long, either under or above ground, as that cut in winter, and it will not powder post.

Yours respectfully, JOHN STIMSON.

West Newton, July 13, 1844.

☞ There are many cases that tend to prove June a better time than winter to cut timber. The bark must be pealed immediately to let off the sap, or timber cut in June will rot as fast as any other.

[*Editor Mass. Plough*

A RECIPE FOR HOUSEKEEPERS.

To make blue wash for walls, get a pound of blue vitriol from a drug store, and have it powdered in a mortar. Provide also two quarts of lime. Take six cents worth of glue, boil it in a quart of soft water till thoroughly dissolved. Put the powdered vitriol in a wooden bucket, and when the glue water is cold, pour it on the vitriol, mix and stir it well. When the vitriol is dissolved in the glue water, stir in by degrees the two quarts of lime. Then try the tint of the mixture by dipping a piece of white paper into it, and when it dries you can judge if it is the color you want. It should be a clear beautiful blue. If too pale, stir in a little more powdered vitriol. It is well to provide an extra quantity of each of the articles, in case a little more of one or the other should be required upon trial of the color. [*American Farmer.*

The above is doubtless a very good preparation, though it appears to us the quantity of water is too small; however, that is easily regulated by the judgment of the operator.—*Ed. Prairie F.*

COLD STARCH FOR LINEN.

There is economy in stiffening the collars and wristbands of shirts with unboiled starch. Take as much of the best raw starch as will fill half a common tumbler, or a half pint cup. Fill it nearly up with very clear cold water. Mix it well with a spoon, pressing out all the lumps, till you get it thoroughly dissolved. Next, add a tea-spoonful of salt, to prevent its sticking. Then pour it into a broad earthen pan, and add gradually a pint of clear cold water, and stir and mix it well. Do not boil it.

The shirts having been washed and dried, dip the wristbands into this starch, and then squeeze it out. Between each dipping, stir it up from the bottom with a spoon. Then sprinkle the shirts, and fold or roll them up with the collars and wristbands folded evenly, inside They will be ready to iron in an hour.

This quantity of cold starch is sufficient for the collars and wristbands of a dozen shirts. Ladies' collars may be done also with cold starch, if the muslin is not very thin.

[*Miss Leslie's Magazine.*

TO GET RID OF RATS.

Several papers say, put plenty of fresh lime about all their haunts.

The Mississippi Valley Farmer recommends to besmear their dens with tar, as they in common with all other rogues dislike a coat of this material.

These are ways to drive them off; but if you wish to catch them, fill a barrel two-thirds full of water, and cover the water with oats or bran, and fix a run by putting a board with one end over the barrel. [*Prairie Farmer.*